

1.0 PURPOSE AND NEED FOR AGENCY ACTION

The U.S. Department of Energy (DOE), Richland Operations Office (RL) needs to demonstrate the feasibility of commercial treatment of contact-handled low-level mixed waste (LLMW) to meet existing Federal and State regulatory standards for eventual land disposal. Treatment before disposal is required for some constituents of this Hanford Site LLMW under the Resource Conservation and Recovery Act (RCRA), Washington State Administrative Code (WAC), Dangerous Waste Regulations (WAC 173-303), and the Washington State Hazardous Waste Management Act (WSHWMA) (Chapter 70.0151, Revised Code of Washington [RCW]). Under RCRA land disposal restrictions (40 Code of Federal Regulations [CFR] 268), some LLMW is suitable for land disposal only after stabilization.

1.1 BACKGROUND

Radioactive and hazardous waste is stored at DOE's Hanford Site located near Richland, Washington (Figure 1.1). The waste inventory includes contact-handled LLMW, which is made up of both low-level radioactive and hazardous constituents. Some of the Hanford Site LLMW contains dangerous waste constituents such as toxic metals that require treatment to meet regulatory standards for land disposal. Stabilization and encapsulation have been identified as relevant treatment technologies for these wastes.

The Hanford Site waste stream evaluated in this Environmental Assessment (EA) is existing waste that is currently stored at the Central Waste Complex located in the 200 West Area of the Hanford Site. Contact-handled waste is defined as waste with transuranic (TRU) concentrations less than 100 nCi/g and container surface dose rates that do not exceed 200 millirem (mrem)/hour (hr). However, most of the waste packages that would be treated under the proposed action have surface radiation dose rates below 1 mrem/hr, and the highest package dose rate is approximately 100 mrem/hr.

A total waste volume of 2,600 cubic meters (m^3) (3,400 cubic yards [yd^3]) was evaluated in this EA. This represents the maximum waste volume that would be treated for demonstration purposes. The waste stream evaluated in this EA represents a small fraction of the projected Hanford Site LLMW volume.

This is an interim action under the Hanford Solid Waste Program Environmental Impact Statement (EIS) (DOE 1997).

Figure 1.1. Hanford Site Map

